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ABSTRACT

This report examines the results of a study designed to compare various aspects of sex role development among upper middle, middle, and lower class white and Spanish language heritage children in three different preschool daycare centers. The 168 children studied ranged in age from 30 months to six-and-a-half years. Measuring instruments were devised to assess children's knowledge of gender, and to quantify their attitudes and behaviors toward masculine, feminine, and neutral toys. Classification and sorting skills, sex-typed toy behavior and verbal sex-typing of toys, occupations and peers were evaluated on the basis of children's performance during videotaped interviews. Although the results indicated general agreement between the two sexes, the two ethnic groups, and across ages about verbal and behavioral sex-typing, ethnicity was found to be a significant factor in measures of gender knowledge and classification skills. A list of references, description of instruments, sample interviews, and children's line drawings are appended. (JCD)

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Sex-Role Stereotypes and Behaviors in Young Children:

Inservice Teacher Training

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SEX-ROLE STEREOTYPES AND BEHAVIORS IN YOUNG CHILDREN:

INSERVICE TEACHER TRAINING

U. S. Department of Health, Education, and Welfare

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PREFACE

The purposes of this small grant were two-fold. The first objective was to identify, describe, and interrelate verbal sex-role stereotypes and the actual sex-role behaviors of at least 100 young children, attending to sex, age, and cultural differences. The second was to develop, present, and evaluate a workshop for the teachers of young children designed to help them develop the skills they need to encourage young children to develop flexible attitudes and behaviors. In addition, the information from the research and workshops was to be made available to educational personnel through a paper written for an education journal and a presentation given at a national education conference. It was to be made available to researchers through an article published in a research journal and through a research conference presentation.

OBJECTIVE 1: RESEARCH

Talking with children was completed in July, 1978. This process took longer than anticipated partially due to illness, vacations, and so on. However, it just takes a great deal of time to encourage preschool-aged children to talk about specific topics, such as sex-roles. Data analysis began in November, 1977, and interesting tangential areas are still being considered. The major portion of this final report deals with the data collection, data results, and discussion. Since most of the results are discussed in the "Discussion" section, the "Data Results" section may be skipped if the reader is more interested in a general overview than in specific findings.

OBJECTIVE 2: WORKSHOPS

A major workshop, "Young Children's Sex-Role Stereotypes," was presented twice at the Annual Meeting of the New Mexico Association for the Education of Young Children, March, 1978. This workshop was also presented at two of the cooperating preschools at which teachers and parents were particularly interested, as part of the Presidential Scholars workshop series at the University of New Mexico, and at "Title IX: A Working Conference," February, 1978. The workshops are described in this report.

PRESENTATIONS FOR EDUCATORS

Two papers have been presented at education conferences: (1) "Sex-typing in Young Children" at the Rocky Mountain Educational Research Association Annual Meeting, Albuquerque, New Mexico, October, 1978; and (2) "Multidimensional Aspects of Young Children's Sex-role Development" at the American Educational Research Association Annual Meeting, San Francisco, California, April, 1979. The latter presentation was selected as a "Conference Highlight." Copies have been sent to ERIC.

Final drafts for journal publication are now in preparation. Several journals have been considered, but we now plan to submit to one of the following: Young Children, the journal of the National Association for the Education of Young Children; or Civil Rights Digest, published by the U. S. Commission on Civil Rights.

PRESENTATIONS FOR RESEARCHERS

"Age, Sex, Ethnicity, and Cognitive Differences in Children's Sex-role Development" has been accepted for presentation at the American Psychological Association Annual Meeting, New York City, August, 1979. This paper will be completed later this summer.

The journal article is now being written and will be submitted to Child Development, the journal of the Society for Research in Child Development.

SUMMARY

Thus, all the objectives from the grant proposal have been met or are well in-progress with completion scheduled for early fall, 1979.

ACKNOWLEDGEMENTS

There are several groups whose assistance to this project must be acknowledged:

(1) The directors and teachers of the three preschool/daycare centers allowed us to interrupt their daily routines and helped us work with the parents and children;

(2) The parents gave us permission to talk to, tape-record, and videotape their children. The support of both these groups was invaluable;

(3) The children themselves were enthusiastic, excited, and talkative -- without them there would have been no project;

(4) The interviewers patiently talked with child after child, doing the same set of instruments but managing to sound fresh each time; and

(5) Our friends and families, who must be very tired of hearing, "Do you know what one of those little kids said today?"

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Much of a child's sex-role and gender knowledge is learned during the preschool years. During this time the child learns gender identity and constancy -- the knowledge that s/he is a girl or boy, that superficial transformations such as hairstyle or dress do not change one's sex, and that there are genital differences between the sexes. The child also learns sex-typed attitudes, which provide the psychological basis and justification for more general sex-role stereotypes about the appropriateness of various behaviors for men and women. These, in turn, often support the dichotomous sex-roles traditionally open to men and women in most Western cultures.

The majority of recent research examining how children learn about gender and sex-roles has been guided by two major theories: social learning theory and cognitive developmental theory.

SOCIAL LEARNING THEORY

Briefly, social learning theory stresses the importance of environmental input into the sex-role learning process. These theorists believe that the learning of sex-roles occurs through discrimination of sex-related cues (clothes, hair, jewelry, etc.), parental/teacher reward or punishment for behaviors considered sex-appropriate or inappropriate, and model observation. Stereotypic models are also found in children's books, television, movies, and so on. Simply put, sex-typed activities are seen as a function of one's entire social learning history (Mischel, 1966).

RESEARCH FROM A SOCIAL LEARNING PERSPECTIVE

Most of the research on children's sex-role development has been based on a social learning model. Studies generally examine differential treatment and modeling cues given by important adults, peers, and symbolic models to boys and girls, or they evaluate the amount of sex-typing present in children's attitudes and behaviors. Occasionally, studies combine these two aspects. The social learning aspects of our research are concerned with the content of children's behaviors and attitudes. These aspects encompass several of the major content areas studied by other researchers: attitudes about toys and actual play behavior with toys; attitudes about adult occupations; and attitudes about general behavioral dispositions of peers.

Toys and Play Behavior

Sex-typed toy preference has been examined primarily from a verbal approach, although more observational research has been done in the past few years. The basic pattern of results from studies which ask children to verbally choose or sex-type toys has shown that boys state preferences for culturally sex-appropriate toys as early as 3 years of age (Fling & Manosevitz, 1972; Rabban, 1950); with age

through the elementary school years, boys increase their sex-appropriate choices (Brown, 1957; DeLucia, 1963; Hartup & Zook, 1960) and decrease their sex-inappropriate ones (Hartup, Moore, & Sager, 1963). The pattern for girls is not as clear, however. Some studies have found that girls select culturally sex-appropriate toys (DeLucia, 1963; Fling & Manosevitz, 1972; Hartup & Zook, 1960; Rabban, 1950), while others have found that they select sex-inappropriate toys (Brown, 1957; Ross & Ross, 1972). Most of the former studies that examine age effects have concluded that girls' sex-appropriate choices increase with age (DeLucia, 1963; Hartup & Zook, 1960) and sex-inappropriate ones decrease (Hartup, Moore, & Sager, 1963). These studies also have shown that boys tend to be more sex-typed than girls at comparable ages (Brown, 1957; DeLucia, 1963; Minuchin, 1965) and that both boys and girls make more culturally sex-appropriate toy choices for boys (Ross & Ross, 1972).

Although there are many fewer observationa studies of children's actual play behaviors with toys than there are verbal studies, most of the observational studies have found sex differences in play behavior. Goldberg and Lewis (1969) found that 13-month-old boys and girls played with similar toys, although girls spent more time with toys requiring fine motor coordination and boys spent more time with toys requiring gross motor coordination. Fagot (1974) studied a small sample of toddlers, 18- to 24-months, at their homes. She found that girls played more with soft toys and dolls and dressed up in adult clothes, while boys engaged in more block play and manipulation of objects and toys. Fagot and Patterson (1969), in an observational analysis of 3-year-old children's play behavior in the preschool setting, found that girls played more with art materials, while boys played more with blocks and transportation toys. They also concluded that both sexes spent equal time in sex-appropriate activities, but that girls spent less time in sex-inappropriate activities than boys did; however, this sex difference was not statistically tested.

In a study designed to examine preschool children's play with adult-validated sex-typed and neutral toys, girls played longer with culturally-defined neutral toys than with either feminine or masculine toys, and equally long with the two sex-typed sets of toys. Boys played longest with masculine toys and equally long with feminine and neutral toys. There were no consistent age trends in play. The children were highly concordant between their verbal sex-typed attributions of the toys and their play, but younger children were more consistent than older children (Schau, Kahn, Diepold, & Cherry, 1979).

Occupations

Most of the occupational research has examined children's free-choice personal vocational choices. As early as preschool age, boys and girls differ in their expressed personal vocational decisions. In general, girls express interest in fewer and more traditionally feminine jobs in contrast to the wider-ranging, often adventuresome, and

traditionally masculine choices of boys (Beuf, 1974; Tremaine & Schau, in press). When asked in a fixed-choice format to indicate whether or not they would like to engage in specific occupations, girls expressed interest in female jobs and boys in male jobs (Tremaine, Schau, & Busch, 1978).

Also, children attribute many job skills and/or preferences exclusively to women or to men. This effect is more marked in preschool and younger children than in older elementary school children (Garrett, Ein, & Tremaine, 1977; Shephard & Hess, 1975). Also, some research has shown that girls tend to be more liberal in their attributions than boys (Shephard & Hess, 1975; Tremaine, Schau, & Busch, 1978).

Children's sex-typing of preferences for one or the other sex to perform a specific service also increased with age from early preschool through late elementary school. Unlike attributions, girls are more sex-typed for jobs culturally defined as female, while boys are more sex-typed for male jobs (Tremaine, Schau, & Busch, 1978).

Very little research has examined the consistency between various aspects of children's occupational sex-typing. In one study, the match between children's attributions and census reality, service preferences and reality, and attributions and service preferences increased with age from 3 to 9 years of age. Boys' match scores between service preferences and reality and between attributions and personal job choices were higher than girls' (Tremaine, Schau, & Busch, 1978).

General Behavioral Dispositions of Peers

There is some indication that younger preschool children (age 3) are less sex-typed than older children (age 5) in their beliefs about sex-role standards for peers and adults in relation to intelligence, play and work activities, androgynous activities, and affect expression (Flerx, Fidler, & Rogers, 1976). However, even children of 2 and 3 have some definite sex-typed ideas. Kuhn, Nash, and Brucken (1978) found that young children said that girls liked to play with dolls, to cook dinner, to clean the house, and so on; occupations for women included nurse, teacher, and cleaning house. Boys, on the other hand, liked to play with cars, to help their fathers, to hit, and as adults will be bosses and mow the lawn. Several other behaviors were sex-typed by boys or girls, but not by both.

Several observational studies have dealt with aggressive behavior in children (e.g., McCandless, Bilons, & Bennett, 1961; Pederson & Bell, 1970; Serbin, O'Leary, Kent, & Tonick, 1973; and Whiting & Pope, 1974). All of these have indicated that boys are consistently more aggressive than girls and exhibit more rough-and-tumble play than girls. Whiting and Pope (1974) also observed boys attempting to control peers (i.e., being "bossy") more often than girls.

In classroom settings, girls observed were more dependent on the teacher, followed teacher instructions, and cooperated more with the teacher (Bell, Weller, & Waldrop, 1971; and Serbin, O'Leary, Kent & Tonick, 1973).

COGNITIVE DEVELOPMENTAL THEORY

Cognitive developmental theory, on the other hand, emphasizes the relationship between a child's cognitive structure and her/his understanding of the category of gender. These theorists postulate that, by the age of 5 to 7, children have learned the concept of gender, although the concept continues to change with age and cognitive development (Emmerich, Goldman, Kirsh, & Sharabany, 1976 & 1977; Kohlberg & Ullian, 1974). Kohlberg and Ullian (1974) stated that the idea of gender "is the bedrock of later sexual and sex-role attitudes" (p. 210). Thus, gender provides an important category for organizing social perceptions and sex-role expectations and behaviors.

According to these theorists, socialization is a selective process in which aspects of the social environment are incorporated into the individual's current mode of thinking and action through assimilation and accommodation. "Current" is a key word, because as intellectual growth continues to change and develop through life, so do the individual's views on sex-roles (see Ullian, 1976).

RESEARCH FROM A COGNITIVE DEVELOPMENTAL PERSPECTIVE

Research stemming from a cognitive developmental view examines variables related to understanding gender, rather than sex-roles. Results have shown that by age 3 children can correctly identify their own, and partially correctly identify others' gender (Kohlberg & Ullian, 1974; Kuhn, Nash, & Brucken, 1978). By the age of 4, they can correctly identify others and begin to show an awareness that gender does not change. Between 4 and 6 or 7, children first realize that gender does not change across time (if you are a girl now, you were a girl baby and will grow up to be a woman) and then understand that gender does not change with changes in appearance (e.g., hair or dress), behaviors (e.g., even if Jack acts like a girl, he is a boy), and motivation (e.g., I am a girl even if I want to be a boy) (Emmerich & Goldman, 1972; Slaby & Frey, 1975). Generally, between 7 and 9 children understand that the final determination of gender is based on genitals, which do not change except in extreme circumstances (McConaghy, 1979). Age is generally moderately related to gender constancy (McConaghy, 1979; Slaby & Frey, 1975).

RESEARCH COMBINING SOCIAL LEARNING AND COGNITIVE DEVELOPMENTAL VIEWS

Thus, either social learning or cognitive developmental theory has guided most of the research into young children's sex-role and gender knowledge. The two models stress the use of different methodologies and examine different aspects of sex-role development (sex-roles or gender knowledge). As Emmerich (1973) suggested, sex-role research is needed which incorporates alternative theories into a common research framework. A few research studies have used this approach. Thompson (1975), for example, looked at gender constancy (including labeling of self), behavior preferences, social environment, and awareness of sex-role stereotyping in 2- to 3-year-old children. By 2 years, all of the children were able to identify the sexes, and common labels, such as "boy" or "mommy," were applied more correctly than pronouns. The children were aware of certain cultural cues (i.e., clothes) that are stereotyped.

At 30 months children accurately recognized the sexes, and used noun labels and pronoun labels. Most identified themselves with the proper sex and were quite aware of sex-typing of clothes and household articles.

By 36 months they were certain of others' sex, their own sex, and cultural stereotyping. Evaluative and gender labels influenced preferential behavior: these children consistently chose those items, such as apples, dolls, etc., that the experimenters labeled as "good" or "same-sex."

Slaby and Frey (1975) found that high gender constancy subjects spent more time watching models than low gender constancy subjects. High gender constancy boys spent more time watching male and female models and more time watching the male model only than low constancy boys. Parallel results were found for the girls, although they were not significant.

Conner and Serbin (1977) looked at young children's behaviors and activities in a nursery school setting and their relationships to three cognitive measures (vocabulary, visual-spatial ability, and block design). They found that the vocabulary measure was positively correlated with both boys' and girls' preference for "sex-appropriate" activities. For boys only, visual-spatial ability was positively correlated with preference for masculine activities.

Tremaine, Schau, and Busch (1978) examined the relationship between classification skill, as measured by a Piagetian task, and several aspects of occupational sex-typing, including the children's consistency between several of these aspects. In general, age, not classification skill, was related to the children's sex-typing scores.

PURPOSE OF THE STUDY

Most of these projects have studied one or a limited number of aspects of sex-role development using primarily samples of middle-class White children. The current project involved middle- and lower-class White and Spanish-language heritage children. We have also combined aspects of both major theories in an attempt to further explicate and interrelate children's verbal stereotypes, sex-role behaviors, and cognitive development.

METHODOLOGY

SUBJECTS

Three preschool/daycare centers were selected to represent different educational methods and to assure a sample of children from the various socio-economic levels. After selecting appropriate schools, the Director of each was contacted to request permission to use the school. In each case, personal contacts were made by the Project Director and Assistant Director in order to explain our needs and to answer any questions they had.

All three care centers chose to participate. The first was a private Montessori school serving upper-middle class, professional families, although a few scholarships were available. The second was a private care center located in a Christian church. The families were primarily middle-class. The third was a state-supported care center serving lower income families. The first two care centers were predominantly White, the other was predominantly Spanish-language heritage. Thus, social class and ethnicity were confounded in these care centers. This situation, unfortunately, represents reality, not only in New Mexico but also in most other sections of the country with high concentrations of people of color.

Letters were sent to the children's parents briefly explaining the project and assuring them that the children would not be embarrassed or frustrated, and that answers would remain confidential. Parents were requested to return the letters indicating whether or not we could interview their children. Table 1 indicates the response

Table 1: Permission Letter Return Rate

School	% Returned	% Returned with Permission Granted
Montessori	90	91
Private	56	100
State-supported	27	98

rate. This gave us a total sample of 168 children; 134, ages 2½ to 6½ years, responded to some or all of the instruments. Half the children were male, half female; 89 were White, 34 Spanish-language heritage (11 "others" were eliminated from data analysis). If a child's last name was Spanish and/or the teacher confirmed that at least one parent was Spanish-language heritage, the child was so classified.

INSTRUMENTS

Instruments from previous research were modified and new instruments devised to assess young children's gender knowledge and cognitive development and to quantify their attitudes and behaviors towards masculine, feminine, and neutral items. After developing the instruments to fit our particular needs, they were piloted. The pilot group consisted of ten children whose parents attended classes in the College of Education, University of New Mexico, and who were not involved with the actual research. These children were videotaped doing two or three instruments. The videotapes were then analyzed to determine whether the children had problems with the vocabulary, clarity of directions, or questions asked in each instrument. The instruments were then revised again. A brief description of each instrument follows (see Appendix A for full copies of the instruments).

Cognitive Instruments

Two instruments were used to assess different aspects of cognitive development. The first specifically measures the concept of gender, the second is a more general classification measure.

Gender knowledge. This instrument, similar to ones used by Emmerich and Goldman (1972) and Slaby and Frey (1975), measured children's gender identity and the extent of their understanding that gender does not change with time, behavior, or external changes in appearance. The instrument used Native American paperdolls,* Spanish-language heritage paperdolls, and White paperdolls, with children randomly assigned to one type of paperdoll. Questions were asked about time stability ("When Johnny/Juan grows up, will he be a woman or will he be a man? Why?"), gender identity ("Is Janie/Juanita a girl paperdoll or a boy paperdoll?"), and situational constancy ("If Janie/Juanita plays with trucks and does things boys like to do, will she be a girl or will she be a boy? Why?") of boy and girl paperdolls and about the child him/herself.

Classifications. This instrument was devised by Kofsky (1966). The children were shown groups of blocks and asked questions based on size, shape, color, and number. The classification skills

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*Available from the University of New Mexico Museum Press, Albuquerque, New Mexico

measured included: consistent sorting; exhaustive sorting; multiple class membership; whole equals the sum of its parts; and conservation of hierarchy. Since the questions within these areas were hierarchically ordered, interviewers were instructed to terminate the interview when a child missed two consecutive questions.

Sex-typed Behavior

The toy play instrument, based on an instrument devised by Schau, Kahn, Diepold, and Cherry (1979), measured children's actual sex-typed toy behavior. About 80 undergraduate and graduate students in the College of Education were asked to rate a large group of toys on a 5-point scale from very masculine to very feminine. A toy was considered male or female if 75 percent or more of the raters agreed on such a designation, and neutral if 67 percent agreed. Three sets of approximately equivalent toys were chosen. In the order of feminine, neutral, and masculine, the toy sets included: doll house, McDonald's hamburger stand, and truck garage; stove, cash register, and tool box; and sewing machine, camera, and drill. For this instrument, each child was placed in a room with the three sets of toys and allowed to play for 5 minutes. The interviewers were instructed to answer questions from the child, but not to play with him/her, not to suggest playing with a particular toy, and not to converse with the child.

Verbal Sex-typing

Three instruments dealt with the children's sex-typing of a group of toys, peer behaviors, and adult occupations.

Verbal toy stereotypes. This instrument measured children's verbal stereotypes about the toys used in the "Toy Play" instrument. The child was asked whether girls, boys, or both boys and girls would like to play with each toy, whether the child would like to play with each toy, and, at the end of the interview, to recall as many of the toys as possible. Due to shyness and young age, not all of the children were verbal. In anticipation of this, line drawings of children's faces were prepared. The first drawing showed four boys' faces, the second was of four girls' faces, and the third had two boys' faces and two girls' faces (see Appendix B for copies of the drawings). Interviewers had the children identify the drawings of boys, girls, and both girls and boys. The children could then point to their response or respond vocally. If the child could not identify the faces, the interview was terminated. Children were randomly assigned to one of two orders of toy presentation.

Occupational stereotypes. This instrument examined children's verbal stereotypes about occupations. It examined two jobs which, according to the United States Census (1973), are 75 percent female (nurse and teacher of young children), two jobs that are 75 percent male (police officer and truck driver), and two jobs which are about equally male and female (movie star and sales clerk). The occupations were chosen so that the children would be familiar with

them. We asked the children to tell us whether they thought that men, women, or both would like that job the best (attribution); which group the children would like to have perform that job when it directly involved them (service preference); and which group they had actually seen doing that job (reality). Again, drawings of faces were used to minimize the need for vocalization. In this case, the faces were of men, women, and both men and women (see Appendix B). Directions to the interviewers were the same.

Peer stereotypes. This instrument measured the children's verbal stereotypes about their peers' behavior. Research has shown sex differences in young children for all nine behaviors described: liking to be near the teacher -- female; obeying the teacher -- female; asking the teacher for help -- female; playing rough -- male; being bossy -- male; climbing -- male; crying -- female; name calling -- male; and showing off -- female. The children were asked to attribute each behavior to girls, boys, or both boys and girls. Again, the drawings of children's faces were used.

INTERVIEWERS

Interviewers were contacted through graduate and undergraduate classes in the College of Education, University of New Mexico, through personal contacts in the College of Education, and through Rent-A-Granny (an employment service for men and women over the age of 50). Each person answering our contacts was interviewed and a group or individual training session, which lasted 2 to 3 hours, was arranged; interviewers were also given detailed direction sheets (see Appendix C). Interviewers were then chosen based upon their interest in the project, their ease in working with children, their ability to follow directions and do the interviews properly, and our need for a particular sex-ethnicity combination. During the first several days of work, each interviewer was carefully supervised. If the supervisor did not feel an interviewer was capable of working alone, or if an interviewer did not establish good rapport with the children, s/he was released. Because of the careful selection process, this rarely occurred. Spanish-speaking interviewers were available for children who were not comfortable in English. Table 2 lists the interviewers by sex and ethnicity.

Table 2: Sex-Ethnicity of Interviewers

White		Spanish-language heritage		Native American	
male	female	male	female	male	female
Fanelli	Gallegly	Chavez	Mendez	--	Salazar
McCarthy	Coats	Carillo	Murray		
Dirle	Byrd	Mondragón	Manzanares-Gonzales		
Barber	Nenno	Gurule	Durán		
Shaffer	Prinz	Koppa	Lopez		
	Johns	Martinez	Ramirez		
	Roberts				
	Benecke				

PROCEDURES

Interviewers worked in one school until all interviews were completed and then proceeded to another school. The schools set up the schedules to determine what hours and days were worked. Generally, one to three interviewers worked two hours each day, five days per week. Children were assigned to interviewers such that they talked with at least three of the five sex-ethnicity combinations; within this constraint, assignment was random. The children were also randomly assigned to the six instruments so that the order of the instruments varied and the instruments presented in any one session varied, except that the two instruments using the toys were not scheduled together. Children were usually presented with two instruments in each of three 15- to 30-minute sessions; however, due to such problems as refusal to talk, tiredness, and so on, some children had several sessions. The sessions were planned to be 1 to 3 weeks apart. Again, due to illness, vacations, interest in classroom activities, and other problems, this was not necessarily the case. The mean time between interview sessions was 3 weeks, the range was 3 days to 24 weeks.

The toy play interview was videotaped; the other interviews were audiotaped. All audiotapes were coded independently by two people; some of the interviewers served as coders, but not for the interviews in which they were involved. If they disagreed on any answer, a third person listened to the tape. Responses were then coded for computer analysis.

The videotapes were viewed by two people who timed how long and in what order the children played with each toy. The coders worked together until their times on each toy agreed within three seconds.

DATA RESULTS

The goal was to interview all children with each instrument. Due to illness, absence, leaving the care center, and interviewer error, this goal often was not accomplished. Thus, the following analyses contain different numbers of children, as indicated by the degrees of freedom reported.

In general, the cognitive measures were scored in the traditional manner: a child had to give an appropriate answer and an accurate justification to receive points. The aspects of the sex-typing measures that asked for an attribution or preference by sex were scored by giving the child "1" for a "female" answer, "2" for "both females and males," and "3" for "male." These individual items were summed to form "meaningful" scores; e.g., the child's sex-typed attribution of the three toys culturally-defined as female, or the child's sex-typed service preference for census-defined male jobs. Scores for each instrument are discussed below.

The results were analyzed using multiple regression techniques sometimes called "backward regression." The contribution of each independent variable to a multivariate set of related dependent variables (e.g., the children's three scores reflecting sex-typed attributions of culturally-defined female, male, and neutral toys) was examined as was the contribution of each independent variable to each of those dependent variables separately. Since several scores were generated for each child, the comparison alpha level was lowered to .0025 to hold the experiment-wise alpha level at .05 (Kirk, 1968). Thus, all effects reported below are significant at the $p \leq .0025$ level.

The independent variables for the analyses of the sex-typing measures included: age (in weeks), ethnicity (Spanish-language heritage, White), sex (female, male), and their interactions. When a curvilinear trend was suspected, the quadratic component of age also was included, although none were significant. In addition, the cognitive variables of classification score and gender knowledge score were used as independent variables.

COGNITIVE RESULTS

Classification Scores

These scores were obtained as a general Piagetian measure of children's classification skills. Each child received one point for correct answers and justifications for the set of questions which corresponded to each of the five aspects of classification; thus, scores could range from 0 (all incorrect) to 5 (all correct). General results are reported to provide a clear picture of classificatory skill in this sample.

The age by ethnicity interaction was significant (F = 11.25; df = 1,90), accounting for 11 percent of the variance. This ordinal interaction was due to the low scores of two 6-year-old Spanish-language heritage children. Otherwise, the scores for each ethnic group increased quite consistently with age, as would be expected. Thus, the interaction is of little importance.

Ethnicity was significant (F = 10.09; df = 1,90), accounting for 10 percent of the variance. White children (M = 2.02; sd = .91) had consistently higher scores than Spanish-language heritage children (M = 1.38; sd = .86).

Age was significant (F = 17.48; df = 1,90), sharing 17 percent of the variance in the classification scores. Classification skill increased with age (r = .40).

No other effects were significant.

Overall, the mean level of classification skill was low (M = 1.82; sd = 0.94). Even the oldest children averaged only 2.57 correct responses.

Gender Knowledge

Total score. A score for the entire instrument was calculated to use as a measure of the children's cognitive development in the specific area of gender. A child received one point for a correct answer with the correct justification for each question; the possible range was 0 to 16.

The ordinal interaction between age and ethnicity was significant (F = 16.57; df = 1,106), sharing 14 percent of the variance in the total gender knowledge scores. As age increased, the difference between the scores of White and Spanish-language heritage children also increased. Simple effects analyses showed that age was significantly related to total scores only for Whites (F = 38.89; df = 1,73), accounting for 35 percent of the variance; as age increased, so did total scores (r = .59). Age was not significantly related to total score for Spanish-language heritage children.

Age also was significant (F = 33.96; df = 1,106), accounting for 24 percent of the variance. Total score increased linearly with age (r = .49), but this effect must be interpreted in conjunction with the age by ethnicity interaction.

Ethnicity was significant (F = 9.93; df = 1,106), accounting for 9 percent of the variance. On the average, White children (M = 9.08; sd = 3.07) were more constant at all age levels than were Spanish-language heritage children (M = 7.15; sd = 2.56).

On the average, children correctly answered and justified 8.49 (sd = 3.05) questions. Classification skill was significantly related to total gender knowledge score (F = 25.44; df = 1,82), sharing 24 percent of the variance. Higher classification scores were associated with higher gender knowledge scores.

Other scoring methods. Several other methods of scoring this interview are currently being analyzed. These include the traditional scoring of identity, time stability, and situational constancy; a scoring of self, male other, and female other; and a scoring of self and other. Preliminary results indicate patterns that basically follow those described above: significant age by ethnicity, age, and classification effects, with ethnicity occasionally significant.

SEX-TYPING RESULTS

Peer Sex-typing

Each child was given two scores. One reflected his/her sex-typed attributions for the female-associated behaviors; scores on the four female-related items were summed (range: 4-12). The second reflected her/his sex-typed attributions on the male items; scores on these five items also were summed (range: 5-15). The lower the score, the more female the attribution; the higher the score, the more male the attribution.

The only significant effect was that of the total gender knowledge score (F = 7.76; df = 2,72), sharing 18 percent of the variance. This effect was due to the relationship between the female-related items and total gender knowledge score (F = 15.36; df = 1,72); children with higher gender scores were more likely to attribute these behaviors to girls (β = -.42; r = -.41). Male-related items were not associated with gender scores either multivariately or univariately. No other effects were significant.

Overall, children did not associate the female items with their female peers (M = 7.66, sd = 1.67; neutral score = 8.00) but did slightly associate the male items with their male peers (M = 11.38, sd = 1.98; neutral response = 10.00).

Occupation Scores

Attributions. Each child was given three scores. One consisted of the sum of her/his attributions given to the two culturally defined female jobs, a second was the sum for the two male jobs, and a third was the sum for the two neutral jobs. Each score ranged from 2 (women) to 6 (men) with 4 being neutral.

There were no significant effects.

On the average, children moderately attributed female jobs to women (M = 3.18; sd = 1.08), moderately attributed male jobs to men (M = 4.80; sd = 1.07), and attributed neutral jobs to both sexes (M = 4.10; sd = 1.07).

Service preferences. Each child again was given three scores. One consisted of the sum of his/her statements about the sex s/he would prefer to have perform the two culturally-defined male jobs for him/her, a second for the two female jobs, and a third for the two neutral jobs. Again, scores ranged from 2 (women) to 6 (men), with 4 as the neutral score.

The ordinal age by sex interaction was significant (F = 6.30; df = 3,78), accounting for 20 percent of the variance. Simple effects analyses did not indicate that age was significant for either sex separately. For male service preference choices (β = .26; r = .34), boys were much more masculine than girls, who were quite neutral in their preferences. For female service-preference choices (β = .26; r = .33), boys and girls showed increasing divergence past age 4, with girls preferring women and boys having no preference. Neutral jobs were not important in the effect.

Sex was significant (F = 5.85; df = 3,78), sharing 18 percent of the variance. Again, male (β = .27; r = .34) and female (β = .24; r = .31) jobs were important in the effect. For female jobs, girls (M = 3.09; sd = 1.09) preferred women more than boys did (M = 3.82; sd = 1.19), with boys' average responses quite neutral. For male jobs, boys (M = 4.78; sd = 1.04) preferred men more than girls did (M = 4.07; sd = 1.21), with girls' average responses quite neutral.

No other effects were significant.

On the average, children were only slightly masculine in their service preferences for male jobs (M = 4.43; sd = 1.78), slightly feminine for female jobs (M = 3.46; sd = 1.19), and near neutral for the neutral jobs (M = 3.73; sd = 1.09).

Child's reality. Each child was given three scores: one was the sum of the child's reality responses to the two female jobs, a second to male jobs, and a third to neutral jobs (range for each score: 2-6).

No effects were significant.

On the average, children said they had seen mostly women perform the female jobs (M = 3.00; sd = 1.04), mostly men perform the male jobs (M = 4.85; sd = 1.15), and both sexes perform the neutral jobs (M = 4.13; sd = 1.36).

Consistency among occupation scores. Each child was given three scores examining her/his consistency among the occupation scores and between each occupation score and census reality. One reflected

the number of jobs the child ascribed to the same sex(es) in her/his attribution of each job and his/her service preference assignment for that job (match between attribution and service preference). A second indicated the consistency between attributions and reality as described by the census. The third looked at the match between service preference and reality. Each score ranged from 0 (completely inconsistent) to 6 (completely consistent), with 2 as chance.

No multivariate effects were significant. However, the match between a child's attributions and reality was significantly related to age univariately (F = 12.57; df = 1,77), accounting for 11 percent of the variance. As age increased, consistency also increased (r = .33).

On the average, the children's consistency between attributions and reality was 3.01 (sd = 1.28), between attributions and service preferences was 3.88 (sd = 1.60), and between service preference and reality was 2.61 (sd = 1.23).

Verbal Toy Sex-typing

Attributions. Each child was given three scores: one consisted of the sum of her/his attributions to culturally-defined female toys, a second to male toys, and a third to neutral toys (range on each score: 3 to 9; low scores indicated female attributions; 6 was neutral).

The age by sex ordinal interaction was significant (F = 10.65; df = 3,84), accounting for 28 percent of the variance. Responses to neutral toys were the basis of this interaction (F = 20.19; df = 1,84; β = .45; r = .51). At the youngest ages, each sex attributed the neutral toys to her/his own sex. With increasing age, the attributions of both sexes approached neutral but still showed some own-sex influence.

Sex was significant (F = 13.17; df = 3,84), sharing 32 percent of the variance. Again, the neutral toys caused this effect (F = 22.90; df = 3,84; β = .47; r = .53). Boys attributed these toys to males (M = 6.86; sd = 1.40) and girls to females (M = 5.36; sd = 1.06).

Age was significant (F = 9.51; df = 3,84), sharing 25 percent of the variance. This effect was due primarily to the female toys (F = 18.02; df = 3,84; β = -.43; r = -.47); with increasing age, children's attributions of these toys changed from neutral to feminine.

On the average, children viewed the culturally defined female toys as quite neutral (M = 5.35; sd = 2.08), the neutral toys as neutral (M = 6.23; sd = 1.45), and the male toys as somewhat male (M = 7.07; sd = 1.39).

Personal preference. This set of three scores consisted of a score indicating the number of times a child indicated that s/he personally would like to play with the culturally-defined female toys; a similar score for the male toys; and another score for the neutral toys (range for each score: 0 to 3).

The age by sex by ethnicity interaction was significant (F = 6.47; df = 3,78), accounting for 20 percent of the variance. The interaction was due to the children's responses to the male toys (F = 17.86; df = 1,78; β = .53; r = .38). White boys across ages consistently indicated that they would like to play with these toys (M = 2.90; sd = 0.31) and White girls across ages consistently indicated a moderate desire to play with these toys (M = 1.62; sd = 1.13). The pattern for Spanish-language heritage children was quite different. The girls increased their preferences for male toys with age and, at the oldest ages, matched the boys' preferences, which were relatively consistent and high across ages.

The age by sex ordinal interaction was significant (F = 13.62; df = 3,78), sharing 34 percent of the variance. This, again, was due to the male toys. With increasing age, boys maintained their high interest in the toys, while girls' interest decreased.

The sex effect was significant (F = 12.16; df = 3,78), sharing 32 percent of the variance. Once again, the effect was due to the male toys. Boys were more interested in these toys (M = 2.80; sd = 0.55) than were girls (M = 1.84).

Overall, interest in all toys was high. On the average, children said they wanted to play with 2.34 (sd = 0.98) of the 3 female toys, 2.51 (sd = .93) of the 3 neutral toys, and 2.33 (sd = 1.04) of the 3 male toys.

Recall. Each child was given three scores: one that indicated the number of female toys recalled, one for male toys, and a third score for neutral toys (range for each: 0 to 3).

Age was significant (F = 5.77; df = 3,77), sharing 18 percent of the variance. This effect was due primarily to the male toys (F = 5.73; df = 1,77; β = .32; r = .40), although univariately female toys were also important (r = .33). With increasing age, more toys of both types were recalled. Even at age 6, however, only an average of 4.5 of the 9 toys was remembered.

Consistency scores. Three consistency scores were developed to assess the children's match between the three aspects of this instrument. One indicated the proportion of toys that had been attributed to the child's own sex and recalled, a second the proportion that had been attributed to the child's own sex and received a "yes" personal preference, and a third the proportion that a child recalled and said "yes" to (range for each score: 0 to 1).

No effects were significant.

TOY PLAY SCORES

Each child was given three scores. One reflected the proportion of her/his play time spent playing with culturally defined female toys; the second indicated the proportion of time spent with male toys; and the third the proportion of time spent with neutral toys (range of each score: 0 to 1).

The age by sex interaction was significant ($F = 9.95$; $df = 2,96$), sharing 17 percent of the variance. This interaction effect was due to the scores on the male and neutral toys, not the female toys.

Boys between the ages of about 3 and 6 spent more play time with male toys than did girls at those ages. Between $2\frac{1}{2}$ and 3 and 6 and $6\frac{1}{2}$, there were no sex differences. Girls between the ages of about 3 and 6 played more with neutral toys than boys did. Males between $2\frac{1}{2}$ and 3 and 6 and $6\frac{1}{2}$ played more with neutral toys. Thus, the youngest ($n = 4$) and oldest ($n = 8$) age groups created the interaction. There was no interaction effect for the female toys.

Sex was also significant ($F = 9.40$; $df = 2,96$), accounting for 16 percent of the variance. Girls ($M = .32$; $sd = .29$) played more with female toys than boys did ($M = .17$; $sd = .20$); they ($M = .29$; $sd = .29$) played less with male toys than boys did ($M = .54$; $sd = .31$); and, girls ($M = .38$; $sd = .33$) played slightly more with neutral toys than boys did ($M = .28$; $sd = .28$). Examining these means across toy types within each sex also showed that girls played about equally with all three categories of toys, while boys spent the majority of their time with male toys.

No other effects were significant.

CONSISTENCY BETWEEN VERBAL TOY SEX-TYPING AND SEX-TYPED PLAY

Children were given three scores to reflect the match between the three aspects of their verbal toy sex-typing and their play with the nine toys. One score reflected the proportion of time a child spent playing with toys s/he verbally attributed to the opposite sex. A second measured the proportion of play time spent with toys the child said s/he would not want to play with. The third showed the proportion of time the child spent playing with toys s/he recalled.

The only variable to show any significance was the match between toy play and recall. As would be expected, age was related to this match score ($F = 8.35$; $df = 1,71$; $r = .32$), sharing 11 percent of the variance. Older children spent more time playing with toys they recalled than younger children did. Total gender knowledge score approached significance ($F = 8.42$; $df = 1,66$; $r = .34$), sharing 11 percent of the variance. Higher gender knowledge scores were associated with longer times spent playing with recalled toys.

COMPARISON BETWEEN AGE, GENDER KNOWLEDGE SCORES, AND CLASSIFICATION SCORES

Age is a variable primarily associated with social learning theory. Classification skill is a general cognitive variable, and gender knowledge is a cognitive variable associated specifically with gender.

Social learning views attach major importance to the former variable, cognitive developmental to the latter two. All three are interrelated to some extent: for age and classification, $r = .40$; for gender knowledge and age, $r = .49$; and for classification and gender knowledge, $r = .49$. To determine the relative importance of each in the sex-typing scores in this study, the proportion of variance accounted for by each, whether statistically significant or not, in relation to each sex-typing measure is listed in Table 3.

Table 3. Percent Variance Shared by Age, Gender Knowledge Score, and Classification Skills with each Sex-typing Instrument

Sex-typing instrument	Age	Gender knowledge	Classification
Peer stereotypes (attributions)	5.8	17.7	8.5
Occupation stereotypes			
Attributions	13.3	6.2	6.0
Service preferences	4.4	1.4	6.8
Reality	13.0	6.6	11.8
Consistency	15.2	7.4	12.6
Toy stereotypes (verbal)			
Attributions	25.3	17.1	9.7
Personal choices	6.9	16.1	5.8
Recall	18.4	8.4	6.4
Consistency	23.9	39.0	10.4
Toy Play	2.5	2.7	1.6
Toy verbal-play consistency			
Attribution to opposite sex and play	0.2	0.0	0.3
"No" personal preference and play	0.2	0.8	1.7
Recall and play	10.5	11.3	10.1

As the table shows, the responses to some instruments share about equal amounts of variance with all three variables. For example, none of the three variables was particularly related to sex-typed toy play behavior. Each of the three variables shared 10 to 11 percent of the variance with the match between a child's toy play behavior and recall responses on the toy verbal instrument.

However, there are some large differences among the variables for some of the sex-typing instruments. Age is clearly strongest for occupational attributions, toy attributions, and number of toys recalled. Gender knowledge is most important in the attributions of peer behaviors, personal choices of toys, and consistency across verbal toy aspects. Classification scores are never clearly most important but in the case of occupational consistency scores, classification contributes nearly as much as age and more than gender knowledge.

KID SAYINGS

The previous section dealt with the quantitative results of the data analysis. An equally interesting aspect of the project is the number and kind of open-ended responses given by the children. Examples of these "kid sayings" are discussed below, by instrument.

COGNITIVE RESULTS

Classification Scores

The questions dealing with multiple membership, whole equals the sum of the parts, and conservation of hierarchy required the children to give a reason for their response. For example, "This is a bag full of red things. Do all the small things belong in the bag with the reds? Why?" (Correct answer: Yes, all the small blocks are red.) Judgements were very easily made: correct answers were obviously correct; incorrect obviously were incorrect. Answers to the example question above included: "They're red;" "They're red and small;" "They're the same color;" "Because you have to put them together;" "I like them to be [together];" "They'll be all mixed up;" "My momma said;" "They just do;" and "They hate bags."

On this instrument there were no typical responses and none that were particularly interesting or unique.

Gender Knowledge

Each time the child was asked a question, s/he was also asked to explain his/her reasoning. For example, "If Janie changes her name to Johnny, would she be a girl or would she be a boy? Why?"

The children gave approximately 180 different ways to tell men/boys from women/girls, and to explain why a person can or cannot change her/his sex. Incorrect responses fell into the following categories: hair, clothes,

play, looks, actions, combinations of these, miscellaneous reasons, or non-responses. Correct responses were pulled from these to form their own category. Typical answers for each category are listed in Table 4.

In the Identity section of the Gender Knowledge instrument, several boys identified the paperdolls and the interviewer by extraneous measures (e.g., hair, clothes), but identified themselves as boys "because I have a penis." A 4-year-old Spanish-language heritage boy knew the difference between boys/men and girls/women because of their "little teetsies" and "big teetsies;" he did not apply this concept to the rest of the instrument, however. A White 4-year-old looked at the male paperdoll's swim trunks and announced that this was a boy "'cause he has on boy's underpants -- my mom's are prettier than mine."

Non-gender constant girls generally gave similar responses to those of the boys. A Spanish-language heritage 5-year-old responded that "girls have poney tails and they're not like boys." A White 5-year-old answered that "boys are bigger and look like [the boy paperdoll] and girls are smaller and skinnier."

Very similar responses were found during the rest of the instrument. For instance, when asked about the girl paperdoll playing with trucks or changing clothes, typical answers across age, sex, and ethnicity were that Janie/Juanita would be a boy "'cause that's boys' stuff;" "'cause boys have jeans, girls have dresses." Answers about changes for the boy paperdoll were almost identical. Constancy appeared in only a few of the older, usually White, children. For example, a 6-year-old White male responded that Janie would always be a girl "'cause there's a girl under [the clothes]." Another White boy, aged 5½, told us that "no matter what you put on or what you do, you still are what you are." The youngest child to show some constancy was a 4½-year-old White girl who said about Janie/Juanita, "She's got a vagina instead of a penis."

In questions about how the boy paperdoll or they themselves could change sex, many children responded negatively because s/he/they are not supernatural beings. The responses were generally quite similar: "he doesn't have super power" or "only a witch can do that." Quite a few children responded that they could change sex by spinning around. One child elaborated by explaining that Wonder Woman changes this way. Presumably, most of the children were referring to this phenomenon. The two or three children who said they could not change because "God made me like this" were considered correct.

Asked which sex they would choose to be, most children responded with their own sex but were unable to explain why. Apparently this is a question very few children ever consider. Those who did explain gave reasons such as "I know how to be a boy now (White male, 5 years);" "'cause I want to be happy (Spanish-language heritage male, 4);" "[Girl, because] I think girls are pretty (White male, 6);" "I'll grow up to be a man (Spanish-language heritage male, 5);" "It's nice being a girl (White female, 5½);" "I want to be a woman (Spanish-language heritage female, 4);" and "[Boy, because] I'd rather be a big size (Black female, 4)."

Table 4: Children's Categorized Responses to Gender Knowledge Instrument

Category	Example Responses
Correct Justification	[That's a girl because] she has breasts. [I'm a boy because] I have a penis. [That's still a girl because] girls can wear boy's clothes. [That's still a boy because] he was born like that and he can't change. No one can change; you are what you are. [I can't become a girl because] God made me this way.
Hair	[To a girl paperdoll with boy's hair: That's a girl because] girls can have short hair. [That's a girl because] she has long hair. [That's a boy because] he has man's hair. [That's a girl because] she has curly hair.
Clothes	Girls wear dresses, boys wear pants. [That's a girl because] she has white shoes; [that's a boy because] he has blue shoes; [you're a man because] you have brown shoes. [If I were a boy,] I wouldn't wear barrettes or earrings. [That's a boy because] he has purple clothes.
Play	[Janie, the girl paperdoll,] would be a boy if she plays with boy's things. [Boys and girls] play with different stuff. [If I were a woman,] I'd play tennis.
Looks	[That's a girl because] she looks pretty. Boys are taller than girls. [That's a boy because] he has big arms. [You're a man because] you don't have make-up.
Actions	[If I were a boy,] I'd mess up the house. [If I were a girl,] I'd act nice. [If I were a girl,] I'd be quiet and whisper. [If I were a boy,] I'd be bad. [If she were a boy,] she'd be a sissy.
Combinations	[That's a girl because] she has girl's dress and girl's hair. [That's a boy because] he looks and plays like a boy.
Miscellaneous	[That's not a boy or] her name would be Johnny. [That's a girl because] she's supposed to be a girl. [You're a man] 'cause you're the one that's grown up -- I'm the boy.
Non-responses	I won't tell you. I can't remember. I don't know.

When asked how they would look or act if they really were the opposite sex, most children did not respond. Those who did were very stereotyped: "I'd look real fine (White male, 4½);" "[I'd wear] a beautiful dress like mommy (White male, 3);" "I wouldn't wear barrettes or earrings (Spanish-language heritage female, 4½);" "I would look like my brother and play with trucks and wear pants and fight with girls -- I would be really mad at my mom and hit and spank my sisters (Spanish-language heritage female, 5);" "I'd mess up the whole house (White female, 3);" "I would punch someone down (White female, 4);" "I'd play cards (White male, 4½);" "I'd play tennis (Spanish-language heritage male, 4);" and "I'd like pretty things (White male, 5)."

SEX-TYPING RESULTS

Peer Sex-typing

This is a structured instrument with a specific set of responses. Fewer than ten children talked about the behaviors, but their responses were rather interesting.

Responding to "Who plays rough and hits other children?", a 3½-year-old White boy said, "Both girls and boys, but I don't" and a 5-year-old Black girl said, "Dumb boys." Responding to "Who does what the teacher says?", a 5½-year-old White girl said, "Girls obey 'cause the boys fight." A more magnanimous Black girl (age 5) answered, "Both girls and boys -- good kids, whoever's good."

Some children answered according to what they see at home. Asked "Who calls other children names like 'dummy' and 'stupid'?", a White girl (age 4) said, "Girls. My sister calls me those names." A 3½-year-old Spanish-language heritage boy, when asked "Who always asks the teacher for help?", responded "My mama."

Occupation Scores

The first question for each occupation in the instrument asked children to define the occupation; e.g., "What does a nurse do?" Children have a unique perspective on some of these jobs; some were sex-typed, but not all.

Across sex, ethnicity, and age, the most common definition of nurse was "men are doctors and women are nurses" or "a nurse is a doctor who's a woman." A nurse "gives people shots and brings flowers when they're in bed (Spanish-language heritage male, 4½)," and they "check my blood (White male, 4½)," although one girl responded, "I really don't like nurses a lot -- they hurt my noggin (Spanish-language heritage, 4½)." This is the job for which children were most uniformly sex-typed in their definitions.

The second culturally female job was teacher of young children. Several children merely responded that "a teacher is a girl." Because preschool children eat in school several times per day, several children

across all groups told us that "when it's snack time, teacher calls to go to snack." Teachers also "ring a bell so people can go to the john (White male, 4)" and "they eat, they serve, they help kids play with blocks, [and] they help little girls play (White male, 4)." And, interestingly enough, "she lives in a school (White male, 5)."

The two neutral occupations elicited little response from the children. Sales clerk was particularly difficult; many children needed an explanation from the interviewer, though once given, they enlarged upon it. Those who identified sales clerks on their own tended to do so within the context of the grocery store. For instance, sales clerks "help you buy things for dinner (Spanish-language heritage male, 4½)" and "they put things where they're supposed to . . . on the shelf (Spanish-language heritage female, 6)."

Several children across age, sex, and ethnicity misidentified movie/TV star as a projectionist, saying something like, "s/he shows you the movies." Typical responses dealt with singing and/or dancing: "They sing and talk about it (Black female, 5);" "[They] dance and sing (Spanish-language heritage female, 5½)." Some answers were very specific. "Movie star's a man -- like Big Bird on Sesame Street (White female, 3½)." Probably the most complete, and charming, definition came from a 3-year-old White girl: "She or he gets dressed up and they're pretty or handsome and they dance or play with somebody."

Almost every child correctly identified truck driver. Most children said that they drive big trucks, dump trucks, garbage trucks, or dirt trucks. One 3-year-old White child said, "They yell and [they're] dumb." Many children said that truck drivers are men. One boy told us very specifically that men drive trucks because "if women drove them, they'd get their clothes dirty (White, 6)."

Perhaps the most interesting responses came with police officer. Children did not seem to be very sex-typed, but those who were, were quite definite. For instance, "If it were women they'd be called 'police women' so 'police officers' are men (White male, 3)." The non-sexist tendency may be due to recent television shows. Several children commented that "we always watch 'Police Woman' and sometimes 'Adam-12' (White female, 4½)."

The interest here, though, is not so much in what the children said, but in the emotions revealed, as shown in Table 5. Some children were very positive about police officers. These children mentioned that police officers help you or help find lost children. One Black girl, age 4, said, "They're our friends -- they let you talk on the walkie-talkie and take you for a ride." A much larger group, from one-third to almost two-thirds of the children in each school, mentioned negative, albeit much publicized, aspects of the police officer's job. These children always mentioned violence, being arrested, and/or going to jail. For example, a police officer "puts people in jail (Spanish-language heritage male, 4½)" and "gives peoples tickets, puts them in jail (White male, 4)." In addition, other children talked about killing, an extremely negative aspect of policing. For example, "He kills guys, bad guys (White female, 4½);" "He kills (Spanish-language heritage male, 4);" and "[Police officers] shoot you, take you to jail, tie up your hands, kill them (Black female, 6)." These children

Table 5: Percent Children Mentioning Positive or Negative Aspects of Policing

School	% Said Police Friends	% Mentioned Violence	% Said Police Kill
Montessori	3	39	6
Private	8	33	13
State-supported	6	64	6

Note: Percentages will not sum to 100 because of neutral or no responses.

watch a lot of television, but it is still rather frightening and sad that 24 percent of them define police as killers, as people who shoot you.

Verbal Toy Sex-typing

This instrument was also structured such that very few children gave responses other than those required. The few who gave other responses tended to be fairly sex-typed. For instance, an American Indian (age 5) told us that girls play with the doll house and that he would not "'cause I'm a boy." A Spanish-language heritage boy of about the same age stated, "Drills are not for girls." Two White boys of approximately the same age (3½ years) were asked about the sewing machine. One responded, "I play with it every time;" and the other, "Boys can't play with that, just the girls." And one 5½-year-old White boy at the end of the instrument said, "I really don't think I'd like to play with most of these things."

TOY PLAY

The children were asked no questions during this instrument. However, a few comments can still be made. Some children flitted from one toy to the next so that timing them was very difficult. Others spent the entire 5 minutes playing with one toy. One 5-year-old White boy spent all 5 minutes taking apart the Take-Apart Tool Box; the interviewer spent 15 minutes putting it back together. A Spanish-language heritage 4½-year-old girl put together an entire scenario in which the people with the trucks from the truck garage helped the family move into the doll house and then they all went to McDonald's to eat. These instances were rare, however.

INTERVIEWER REMARKS

The interviewers told us several times that they really enjoyed working with these children. We all found the children very cooperative and enthusiastic. Sometimes this even caused problems, as when children whose parents did not want them to be involved insisted that they wanted to play with the interviewers. Most interviewers handled this situation quite well by playing with them for a few minutes or explaining that their "turn" would be later.

WORKSHOPS

The emphasis of each workshop was somewhat different, depending on the audience. We had permission from the parents of the children with whom the instruments were piloted to show those videotapes. Whenever possible, the videotapes were used to show the audience how children react to the instruments.

An outline of the workshops is below. The content of areas which are fairly self-explanatory will not be given a great deal of detail.

PRESENTATION OUTLINE

A. Project supported by WEEAP, 1974.
   1. Purpose of WEEAP.
   2. Activities supported by WEEAP.

B. What is sex-role stereotyping and how does it develop? (Encourage audience discussion.)
   1. Belief that men should behave in certain manners (rough, aggressive) and should hold certain jobs (doctor, President of U.S.), and women should behave in certain other manners (cry, be good) and have certain other jobs (mother, nurse). Men are generally seen as independent, aggressive and women as nurturant, demure.
   2. Develops through modeling (e.g., watching parents, teachers, TV, peers, reading books) and through reinforcement (i.e., directly to the person or vicariously by watching/hearing someone else receive reinforcement). Learning during early childhood forms basis for later behaviors, occupation choices, beliefs.
      a. Brief review of literature.
      b. Discuss teacher's role in sex-role development.

C. Purpose of study.
   1. To learn about young children's sex-role stereotypes and behaviors. Cross-section of children -- male, female; ethnic groups.
   2. We are not trying to change sex-roles, just learn what they are. With this information, we can help people learn to be flexible in order to maximize their potential choices.
   3. We do not make judgements about parents based on what children say -- they learn many places. Explain responses' confidentiality.

D. How study done.
   1. How schools chosen.
   2. Children -- age, sex, ethnicity.
   3. Interviewers -- where from, sex, ethnicity.
   4. Instruments -- brief explanation. Show appropriate videotapes.

E. Results.
   1. Children in agreement, showing moderate overall sex-typing for attributional and reality aspects of occupations. However, girls believed women should perform the female jobs for them while boys were neutral; boys believed men should perform the male jobs for them while girls were neutral. With increasing age, the match between attribution and census reality increased.
   2. Boys attributed neutral toys to males; girls attributed them to females. With age, female toys attributed more to females. Children's interests in all the toys high. Boys more interested

in male toys than girls were; but no differences in interests for female or neutral toys. Recall of male and female toys increased with age.

3. Children with higher gender knowledge scores sex-typed female peer behaviors more in female direction. Overall, children view female items as applying to both sexes and male items to boys.
4. Girls played equally long with female, male, and neutral toys; boys played longest with male toys, equally with female and neutral toys.
5. Age related to responses on some sex-typing measures, gender knowledge to others; both related to some of the measures.

F. What the children said.
G. Discuss adults' versus children's stereotypes.
   1. Many adults believe children very stereotyped before preschool -- not true.
   2. Children less stereotyped about toys than adults.
   3. Discuss how to rate selves and/or their preschools on sexism.
H. How does all this help educational equity?
   1. Helps males and females.
   2. Stereotypes based on sex, ethnic group, religious beliefs, and even body-build limit people. If a young girl decides women cannot be doctors, she will not plan proper education. Even if she later changes her mind, must make up lost years. If boy grows up believing child-raising is for women, he will not participate in raising his own children -- he and children will lose a meaningful set of experiences.
I. Concept of androgyny.
   1. Takes best characteristics of both sexes.
   2. Sandra Bem's work.
   3. Give participants the Bem Sex-role Inventory.
J. Sources of non-sexist materials.
K. Non-sexist use of sexist materials.
   1. Have children read books and write down jobs held by women and men. Discuss results.
   2. Watch TV commercials and discuss products men and women sell. Who are the products for?
L. Open for questions.

The primary purpose of each workshop, regardless of the audience, was to help them understand the content of their own and young children's stereotypes, how these stereotypes are developed and maintained, and the probable consequences of the stereotypes. Knowledge is the first step in change.

DISCUSSION

DATA ANALYSIS

Overall, there was a great deal of agreement between the two sexes, the two ethnic groups, and across ages about verbal and behavioral sex-typing. Ethnicity by itself was not a significant factor in relation to any of the sex-typing measures. Sex, age, and their interactions sometimes were significant. In addition, the children as a group were less

sex-typed about the sex-typed categories than were adults (as in the toy attribution instrument) or census reality (as in the occupational attribution measure).

Within the sex-typing instruments, the results often depended on what kind of question was asked (e.g., attribution to the general population or personal choice) and which sex-typed category was being considered (i.e., male, female, or neutral). Within the occupation instrument, three different questions were asked about each job. The children were asked for their sex-typed attributions for adults in general, their own preference regarding the sex of the adult they would want to do the job for them, and the sex of people they have seen doing the job. Children, across age, cognitive, sex, and ethnic categories, agreed on their general attributions and on their reality judgements. They were moderately sex-typed in the culturally appropriate direction on their attributions and perceived the culturally appropriate sex doing the job. However, service preference responses to male and female jobs showed quite a different pattern. Girls preferred women to perform the female jobs more than the boys, who were quite neutral, while boys preferred men in the male jobs more than the girls, who were quite neutral. So, for example, even though boys agreed with girls that women would like to do the female jobs best and that these jobs are generally performed by women, they were neutral in their own personal service preference, while girls strongly preferred women. The opposite was true for male jobs. The difference must be due to the personal choice children are given in the service preference question. Thus, children do differentiate among these three aspects of occupations. To obtain a clear picture of children's sex-typing of occupations, all three must be measured; however, these three aspects may not be exhaustive.

Consistency, or match, between the various aspects of occupational sex-typing is important to consider. Only the children's match between general attributions and census reality increased with age; their matches between service preferences and reality and attributions and service preferences did not change. Again, this may be due to the impersonal, general nature of attributions. A child's service preferences and perceptions of her/his own reality are much more personal and reflect the child's world, as opposed to the adult's world. In general, children were only moderately consistent. It would be interesting to compare these scores to adult consistency scores.

In general, no other research on occupational sex-typing has been done which looks at this age range and ethnic blend of children. Tremaine, Schau, and Busch (1978) examined a larger age range of children and found significance with age and sex in several measures not found here. Significant results here, however, match those in Tremaine, Schau, and Busch.

Some variance occurred across the aspects of verbal toy sex-typing, but not as much as with occupations. The interesting patterns in these results were due to the differences among sex-typed toy categories. The attribution questions were designed to measure children's attitudes about what toys "children" would like to play with. The preference questions asked for a personal choice regarding each toy. The recall question was asked to examine possible differences in recall by sex-typed toy category.

In general, the children considered the female and neutral toys as of interest to both sexes and the male toys of moderately more interest to boys. However, only the female and neutral toys were important in the significant effects. Both boys and girls agreed in their attributions of male and female toys, but boys attributed neutral toys more to males and girls more to females. Children across the age range agreed in their attributions of male and neutral toys, but ascribed the female toys to girls more with increasing age. Thus, even the youngest children knew the cultural sex-typing of male toys at a moderately accurate level, while only the older children were starting to be aware of the cultural sex-typing of female toys. This result does not agree with the results from the older studies on verbal toy choices (see the literature section). A possible reason for this may be the inclusion of the neutral ("both") category response in our study.

The pattern is different in personal preferences; the only toy category of importance was male toys. Boys had a higher interest in male toys than girls did, while the sexes did not differ in interest on female or neutral toys. Again, the lack of a sex difference for female toys does not support the older studies on verbal toy choices. Also, boys and girls did not change their interests in female and neutral toys across age; with male toys, boys' interest remained high, while girls' decreased with age. Overall, interest in playing with all of the toys was high. These findings also contradict the ideas of many parents, who believe that their child is interested only in "appropriate" sex-typed toys (Schau, Kahn, Diepold, & Cherry, 1979).

For recall, more male and female toys were remembered with increasing age. Neutral toys did not show this effect. There were no effects in relationship to the children's consistency across these three aspects.

Again, the results show that children differentiate between general attributions and personal preferences of toys. Both aspects are important for a general understanding of sex-typing in the area of toy preference.

In our behavioral toy play measure, boys played most with masculine toys and less but equally with feminine and neutral toys. Girls, however, played about equally with all three categories of toys. These results are not in agreement with several of the studies discussed in the literature review; they are in basic agreement with Schau, Kahn, Diepold, and Cherry (1979).

Ethnicity was a significant factor on both cognitive measures: White children had higher classification and total gender constancy scores than Spanish-language heritage children. Age was positively related to classification scores and gender knowledge scores, although the latter effect was due primarily to the strong relationship for Whites which did not exist for the Spanish-language heritage children. Due to the fact that the Hispanic sample came primarily from a lower-income care center, it is not possible to know if it is ethnicity, social class, or a combination of the two operating in relation to the cognitive results. Overall, though, our whole sample's average classification score of 1.82/5

was almost one full point below the average score of 2.71 from White 3- and 5-year-old children in a Midwest sample (Tremaine, 1977).

Clearly, the responses to some of the sex-typing instruments are about equally related, or sometimes unrelated, to age, classification skill, and gender knowledge (i.e., toy play, the match scores between toy play and toy verbal, and the match between recall and toy play). Age is clearly strongest for some instruments (i.e., occupational attributions, toy attributions, and number of toys recalled). Gender knowledge is strongest for some instruments (i.e., attributions of peer behaviors, personal toy choices, and match scores across verbal toy aspects. Classification skill is never most important. These results imply that social learning aspects are more important in some cases, cognitive structure as it directly relates to gender is important in others, and that both are sometimes equally important. Since sex-role stereotyping is a method of classifying people into categories based on the attribute of gender, logically classification skill should influence sex-typing. The results from this study provide little support for that view. The gender knowledge instrument actually measures the cognitive use of the attribute of gender in classification; and indeed it is related to several sex-typing measures. These results pose a key question: Why is age related to specific instruments and gender knowledge to others?

The methodology in this study varied from much of the previous research. When children were asked sex-typing questions or put in the play situation with toys, they were provided with sex-typed (i.e., males, females) and non-sex-typed (i.e., both females and males) options. This procedure measured flexibility in their attitudes. Most other research has used only sex-typed responses, which actually measured knowledge (Garrett, Ein, & Tremaine, 1977). Our sample included White and Spanish-language heritage children from the lower- and middle-classes, as opposed to the middle-class White children used in most other research. We validated the sex-typed aspects of our items by using adult samples (e.g., toys), past research (e.g., peer behaviors), or an impersonal measure of reality (e.g., the census for occupations). All of these methodological aspects may result in differences from previous research; especially with children, responses depend on who you ask, what you ask, and how you ask it.

KID SAYINGS

Again, there was a great deal of agreement across all groups in their open-ended responses. Although many children had somewhat unique ways of differentiating the sexes, when collapsed into categories of hair, clothes, and so on, the responses were quite uniform.

That the children did not respond to "How would you act/look if you were [the opposite sex]?" was a surprise. Even though they all see the opposite sex and could ascribe behaviors and looks to the opposite sex, they apparently could not or would not conceptualize themselves as the opposite sex and so did not answer the question. This is confirmed by the number of children who, when asked "What sex would you choose to be?", chose their own sex but did not justify the choice.

While we did have a few gender constant children, this sample was generally too young for this level of development. The results were compatible with those of Emmerich, Goldman, Kirsh, and Sharabany (1976 & 1977).

There were no surprises in the children's definitions of the occupations. The definition of a job seemed to match the child's attribution in that a sex-typed definition was followed by a sex-typed attribution. As noted previously, attributions were more culturally appropriate than service preferences.

Twenty-four percent of the children defined police officer as someone who "kills" and "shoots you." Since several children mentioned watching police shows on television, this may be at least part of the cause. If so, it provides another reason to decrease the violence on such shows. Over 50 percent of the children based their answers on violence, only 5 percent made positive comments about police officers. Furthermore, this finding was not based on one social class or ethnic group; children across age, sex, and ethnicity agree about police officers.

WORKSHOPS

Parents and teachers were sometimes amazed at the children's responses and their sex-typing, or lack of it. Many parents reported that they try to show their children that they are equal partners; nevertheless, the children often gave such responses as men don't cook, boys don't play with the stove. As another example, a man with long hair can ask a child to identify his sex; the young child may justify her/his response of "man" by explaining that "men have short hair."

Quite a few parents were not aware of the full effects of TV, books, and their own behaviors. Teachers were not aware of some of the subtler ways they differentially treat boys and girls.

The workshops were quite successful. Parents could see their own child(ren)'s responses and discuss them. Teachers could ask questions specific to their own needs. Because of the small size of the audience (15 to 25), one-to-one contact was encouraged.

SUMMARY

For this project we collected several different kinds of sex-typing data from two major ethnic/social class groups. This procedure allowed us to examine the interrelationships among those sex-typing aspects. It is vitally important that work similar to this is continued, with yet other ethnic and cultural groups and with other ages across the lifespan. We are continuing our work with American Indian young children. It is only in this way that the content of sex-typing for different cultural and age groups can be understood. Once educators have this knowledge, interventions with teachers, parents, and other adults, as well as children, that start from their current level of stereotypes can be developed, and

thus will have a maximal chance of success in increasing educational equity. Even though a large quantity of research on sex-typing is available in the literature, its impact on theory and on interventions has been minimal. In our view, this is because of the "one-shot" nature of much of that work as well as the select aspect of the middle-class White subjects generally used.

Teachers and parents, especially of young children, generally are enthusiastic about projects such as this one. They do not perceive it as a "women's lib" project or as anything threatening. They want to know as much as possible about their children that will help the children grow to be happy, successful adults.

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Appendix A:

Instruments

Interview A: Gender Knowledge

Materials: 1 boy paperdoll, 1 girl paperdoll, tape recorder

Directions: Parts of this interview may be too hard for the very young children. And parts of it may be embarrassing to the older children. Give the children lots of support and make the situation as light as possible. But we don't want them giving nonsense (to them) answers.

I. Identity

1. (Show boy paperdoll with hair) "Is this a girl or a boy? How can you tell?" (Repeat answer)

2. (Show girl paperdoll with hair) "Is this a girl or a boy? How can you tell?" (Repeat answer)

3. (Point to yourself) "Am I a man or a woman? How can you tell?" (Repeat answer)

4. (Point to the child) "Are you a boy or a girl? How can you tell?" (Repeat answer)

If the child hasn't answered or won't answer the above four questions correctly, stop the interview.

II. Constancy

A. (Set out the girl paperdoll in front of the child. Have him/her put her hair on.)

1. "When Janie/Juanita was a little baby, was she a little girl or was she a little boy baby?" (Repeat answer) "Was she ever a little (opposite of S's choice)?" (Repeat answer)

2. "If Janie/Juanita plays with trucks and does things that boys like, would she be a boy or would she be a girl? Why?" (Repeat answer)

3. "If Janie changes her name to Johnny/Juan, a boy's name, would she be a girl or would she be a boy? Why?" (Repeat answer)

4. "If Janie/Juanita changes her name to Johnny/Juan and puts on boy's clothes like this" (have the child put the boy's clothes on the girl doll) "and cuts her hair like this" (have the child put on the boy's hair) "and plays with trucks and does things that boys like, would she be a boy or would she be a girl? Why?" (Repeat answer)

B. (Remove the girl doll and set out the boy doll. Have the child put the doll's hair on.)

5. "When Johnny/Juan grows up, will he be a man or will he be a woman? Will he ever be a (opposite of S's choice)?" (Repeat answer)

6. "If Johnny/Juan really wants to be a girl, can he turn into a girl?" (If they say YES): "How?" (Repeat answer)
(If they say NO): "Why not?" (Repeat answer)

7. "If Johnny/Juan lets his hair grow long and wears ribbons in it, like this" (have the child put the girl's hair on the boy doll), "would he be a girl or would he be a boy? Why?" (Repeat answer) (Have the child put the boy's hair back on the boy doll)

8. "If Johnny/Juan puts on girl's clothes, like this (have the child put the girl's clothes on the boy doll), "would he be a boy or would he be a girl? Why?" (Repeat answer) (Have the child put the boy's clothes back on the boy)

9. (Spread out the girl's clothes, hair, etc. around the boy doll) "What could you do to Johnny/Juan to make him into a girl?" (After the child is through): "So (child's responses) will really make Johnny/Juan into a girl?"

C. (Remove paperdolls): "Let's talk about you."

10. "When you were a little baby, were you a little girl or a little boy baby? Were you ever a little (opposite sex of S's choice) baby?" (Repeat answer)

11. "When you grow up, will you be a man or a woman? Will you ever be a (opposite sex of S's choice) ?" (Repeat answer)

12. "If by magic you really could be a girl or a boy, which would you choose? Why?" (Repeat answer)

13. "Let's say that you wanted to change into a (opposite sex of S) . How could you do it?" (Repeat answer) "Could you ever really be a (opposite sex of S) ?"
(If they say YES): "Do you mean really, or just pretend?"
(If they say PRETEND): "Could you really be a (opposite sex of S) ?" (Repeat answer)

14. "If you really did become a (opposite sex of S) , how would you look different from the way you look now?" (Repeat answer)
"If you really did become a (opposite sex of S) , how would you act different from the way you act now?" (Repeat answer)

Interview B: Toy Play

Materials: 9 toys, videotape recorder

Directions: Set up and test the videotape before you start. Do not do this interview if you cannot get the videotape tape to run properly. One very common problem is incorrect threading. Follow the diagram exactly.

The object of this interview is to see what toys the children play with. It's also to measure how often they talk to you, ask for help, etc. Don't actually play with them, but if they need help (e.g., they don't remember how to work a toy), show them but then let them play alone. Don't be stand-offish.

Set the toys up before you bring the child in. It is best to set them up on a low table but some of the care centers won't have one available. Judy and I will check this out and leave you a note at the care setting as to where you should set the toys up. If there is no table, use the floor. Make certain that the toys are set up such that they are separate from each other. Put them in a different order each time you do the interview; do not put all the boy's toys together, etc. If the child wants to put them together to play with them, that's fine. When you bring the child in, name each toy and show the child how it works:

"Here are some toys. This is a doll house. See the people and furniture. And the doorbell rings.

This is a movie camera. You look through this end, and turn the handle on the side.

This is a tool box. Here is a screw driver. You can use the tools to fix things.

This is a McDonald's hamburger stand. See the cars and the person who sells hamburgers and the trays?

This is a drill. You pull the string and this goes around to drill holes.

This is a stove. Here are some pans and some food and an apron. You can cook on it.

This is a cash register. You put the money in here and push this key. And you can turn this handle, a bell rings, and the drawer comes open.

This is a truck garage. Here are the trucks. You can put the boxes in the trucks like this and you can put the boxes here and here.

This is a sewing machine. You pull the string and this part goes up and down to sew.

You can play with any of these toys that you would like. I have to do some work with this machine, which will be running. If you need my help, just call me. Okay?"

(Be as unobtrusive as possible in taping them. Look like you are busy with the recorder part, rather than with the camera. Time them for five complete minutes. Then thank them. Ask them if they had a good time playing.)

Interview C: Toy Verbal

Materials: Drawings of three groups of children -- 4 girls' faces, 4 boys' faces, and 2 girls' and 2 boys' faces, photos of the nine toys, arranged in the order indicated on the bottom of the photos, tape recorder

"Let's play a game. Here are some pictures of groups of children. (Go through the directions presented in the "General Interviewer Instructions" sheet.) Here are some pictures of toys. You can be in charge of telling me which group of children would like to play with each toy the best."

(Turn on the tape recorder; show them photo #1)

1. "OK, (child's first name, or complete name if you have been assigned two children with the same first name). This is a doll house. Put this photo with the group of children who you think would like to play with it the most." (Repeat or add explanation as necessary. Then repeat their choice) "The (their choice) would like to play with the doll house the most? Would you like to play with it?" (Repeat their answer) "You (their answer) ?"
2. (Remove photo 1 and show them photo 2) "This is a tool box. Put it with the group of children who would like to play with it the most." (Repeat their answer) "Would you like to play with it?" (Repeat answer)
3. (Photo 3) "This is a movie camera. Who would like to play with it the most?" (Repeat answer) "Would you like to play with it?" (Repeat answer)
4. (Photo 4) "This is a sewing machine. Who would like to play with it the most?" (Repeat answer) "Would you like to play with it?" (Repeat answer)
5. (Photo 5) "This is a McDonald's hamburger stand. Who would like to play with it the most?" (Repeat answer) "Would you like to play with it?" (Repeat answer)
6. (Photo 6) "This is a cash register. Who would like to play with it the most?" (Repeat answer) "Would you like to play with it?" (Repeat answer)
7. (Photo 7) "This is a truck garage. Who would like to play with it the most?" (Repeat answer) "Would you like to play with it?" (Repeat answer)
8. (Photo 8) "This is a stove. Who would like to play with it the most?" (Repeat answer) "Would you like to play with it?" (Repeat answer)
9. (Photo 9) "This is a drill. Who would like to play with it the most?" (Repeat answer) "Would you like to play with it?" (Repeat answer)

(Make certain that all of the photos are out of sight) "Tell me what toys you saw." (Repeat each toy name clearly)

Interview D: Occupations

Materials: Drawings of three groups of adults -- 4 men's faces, 4 women's faces, and 2 men's and 2 women's faces, tape recorder

"Let's play a game. Here are some pictures of groups of adults/grown-ups." (Go through the directions presented in the "General Interviewer Instructions" sheet.) "Let's talk about some jobs that adults do."

1a. "What does a nurse do?" (Probe until the child uses a pronoun [he or she] that can be understood on the tape and then repeat child's answer, omitting the pronoun. If the child absolutely won't say anything or answers incorrectly, say:) "A nurse is a person who helps the doctor take care of people when they are hurt or sick."

b. "Who do you think would like to be nurses the best? Men or women or both men and women?" (Point to the appropriate drawing as you go through the responses. Repeat the child's response.)

c. "Let's pretend that you are sick and have to go see some nurses. Would you like to see women nurses or men nurses or both women and men nurses?" (Point, repeat)

d. "Have you ever been to see real nurses? Were they both men and women nurses or men nurses or women nurses?" (Point, repeat)

2a. "What does a sales clerk do in a store?" (Make sure the child uses a pronoun and repeat answer, omitting the pronoun, or say:) "A sales clerk is a person who sells things in a store."

b. "Who do you think would like to be sales clerks the best? Women, or men, or both men and women?" (Point, repeat)

c. "Let's pretend that you are going to buy something in a new store. Do you want the sales clerks who help you to be both men and women clerks, men clerks, or women clerks?" (Point, repeat)

d. "Have you ever been in a store and seen real sales clerks? Were they women clerks, or both women and men clerks, or men clerks?"

3a. "What does a truck driver do?" (Make sure the child uses a pronoun and repeat child's answer, omitting pronoun, or say:) "A truck driver is a person who drives big trucks, usually on long trips."

b. "Who do you think would like to be truck drivers the best? Both women and men or women or men?" (Point, repeat)

c. "Let's pretend that you are going to ride in some trucks. Do you want the drivers to be men or women or both men and women?" (Point, repeat)

d. "Have you ever seen real truck drivers? Were they women or men or both women and men?" (Point, repeat)

4a. "What does a teacher of young children do?" (Make sure the child uses a pronoun and repeat child's answer, omitting pronoun, or say:) "A teacher of young children is a person who plays with children and teaches them interesting things."

b. "Who do you think would like to be teachers of young children the best? Both men and women, or men, or women?" (Point, repeat)

c. "Let's pretend that you moved to a new town and so you are going to a new school. Would you like the teachers at that school to be women, men, or both women and men?" (Point, repeat)

d. "Do you know some people who really are teachers of young children? Are they men, or both women and men, or women?" (Point, repeat)

5a. "What does a police officer do?" (Make sure that the child uses a pronoun and repeat the answer, omitting pronoun, or say:) "A police officer is a person who makes sure the people obey laws and who works to protect us."

b. "Who do you think would like to be police officers the best? Both men and women, or women, or men?" (Point, repeat)

c. "Let's pretend that a bad person got into your room and stole all of your toys. You called the police to come and help you get them back. Do you want the police officers who come to help you to be men, or women, or both women and men?" (Point, repeat)

d. "Have you ever seen any real police officers? Were they both men and women, or men, or women?" (Point, repeat)

6a. "What does a movie star do?" (Make sure that the child uses a pronoun and repeat the answer, omitting pronoun, or say:) "A movie star is a person who acts in the movies."

b. "Who do you think would like to be movie stars the best? Men, or both men and women, or women?" (Point, repeat)

c. "Let's pretend that you get to meet some movie stars. Do you want to meet women movie stars, or men movie stars, or both women and men movie stars?" (Point, repeat)

d. "Have you ever seen real movie stars, like on TV? Were they men, or both men and women, or women?" (Point, repeat)

Interview E: Classifications

Materials: Various sets of wooden and large plastic blocks in various colors. Each set is described below and should be easy for you to differentiate.

Directions: Parts of this interview may be too hard for some of the very young children. Give the child lots of support. If the child cannot do the task, go to the next task. Make this a game. (Comments in parentheses ( ) are correct answers; they are for your information only.)

Consistent Sorting

Materials: Large plastic red, blue, and yellow circles; red, blue, and yellow triangles; red, blue, and yellow squares; and the green triangle.

"I need to put these blocks into groups that are alike. Can you help me find which ones are alike?" Ask child to explain why s/he is grouping the blocks the way s/he is grouping them. Encourage child to find as many groups as possible. (Child can group by either color or shape.)

Exhaustive Sorting

Materials: Large plastic blocks. One red and one blue circle; one green and two blue squares; two red and two green triangles. Three empty boxes.

Ask child to pick one block (any block) and put it in a box. Then tell him/her, "I'd like you to put all the blocks that are like that one into the box with it." When the box is complete, go on to the remaining blocks until all blocks are chosen. Ask child to explain why s/he is grouping them in that way.

Multiple Class Membership

Materials: Square wooden blocks. Large squares are green and red, small squares are all red. Three bags.

Say to the child:

A. "This is a bag full of red things. Do all the small things belong in the bag with the reds? Why?" (Yes, all the small blocks are red.)

B. "This is a bag for squares. Do the greens belong in the bag? Why?" (Yes, the greens are squares.)

C. "Do the reds go in the bag for squares? Why?" (Yes, all the reds are squares.)

D. "This is a bag for small blocks. Do the greens go in it? Why?" (No, the greens are all large blocks.)

Whole is the Sum of Its Parts

Materials: Two blue wooden squares mixed in with a half-dozen red ones.

Ask the child:

"Are all of these squares? Are the red ones square? Are the blue ones square?"

"I am going to tell you a story. Mary/Maria and Joan/Juanita wanted to build a very high tower using all these blocks. Mary/Maria said they could make the highest tower if they took all the red and all the blue blocks and put them together. Joan/Juanita said they could get the tallest tower if they put all the squares together. Who was right? Mary/Maria? Joan/Juanita? Both?" (Both, since the reds and blues are all squares.)

"If you put the reds and blues together, would there be more of them, or more squares, or as many reds and blues as squares?" (There are as many reds and blues as squares, since the reds and blues are squares.)

Conservation of Hierarchy

Materials: Two blue wooden squares mixed in with a half-dozen red ones.

Ask the child:

"Are all of these squares? Are the red ones square? Are the blue ones square?"

"If I took away all the reds, are there just blues left, just squares left, or both blues and squares? Why?" (Both blues and squares, since the remaining blocks are all blue and square.)

"If I took away all the reds, would there be more blues or more squares left, or as many blues as squares?" (Since all the remaining blocks are blue and square, there are as many blues as squares left.)

Interview F: Peer Stereotypes

Materials: Drawings of three groups of children -- 4 girls' faces, 4 boys' faces, and 2 girls' and 2 boys' faces, tape recorder

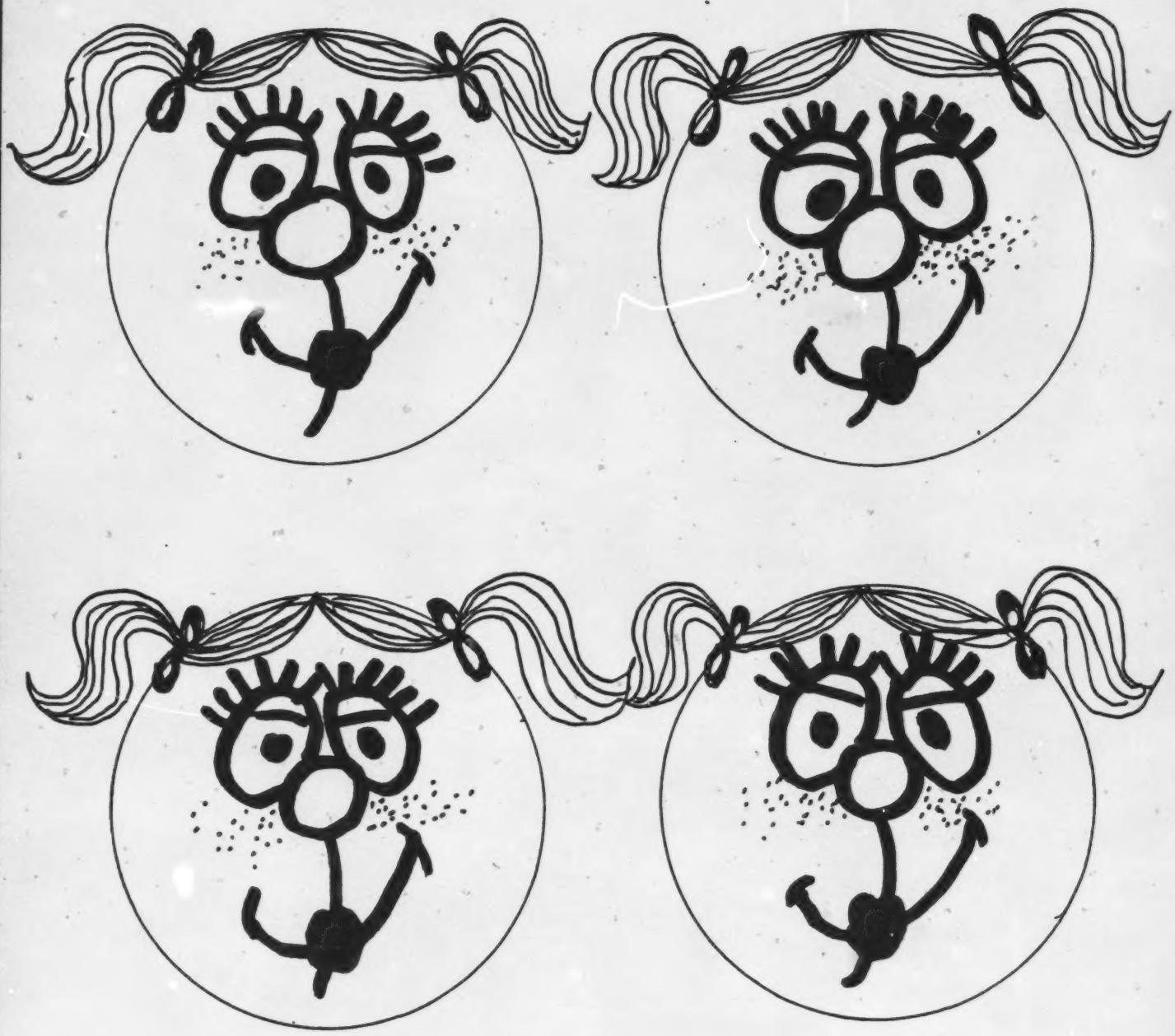
"Let's play a game. Here are some pictures of groups of children." (Go through the directions presented in the "General Interviewer Instructions" sheet.) "I'm going to tell you about some things that some of these children do and I need you to guess which group of children I'm talking about, OK?"

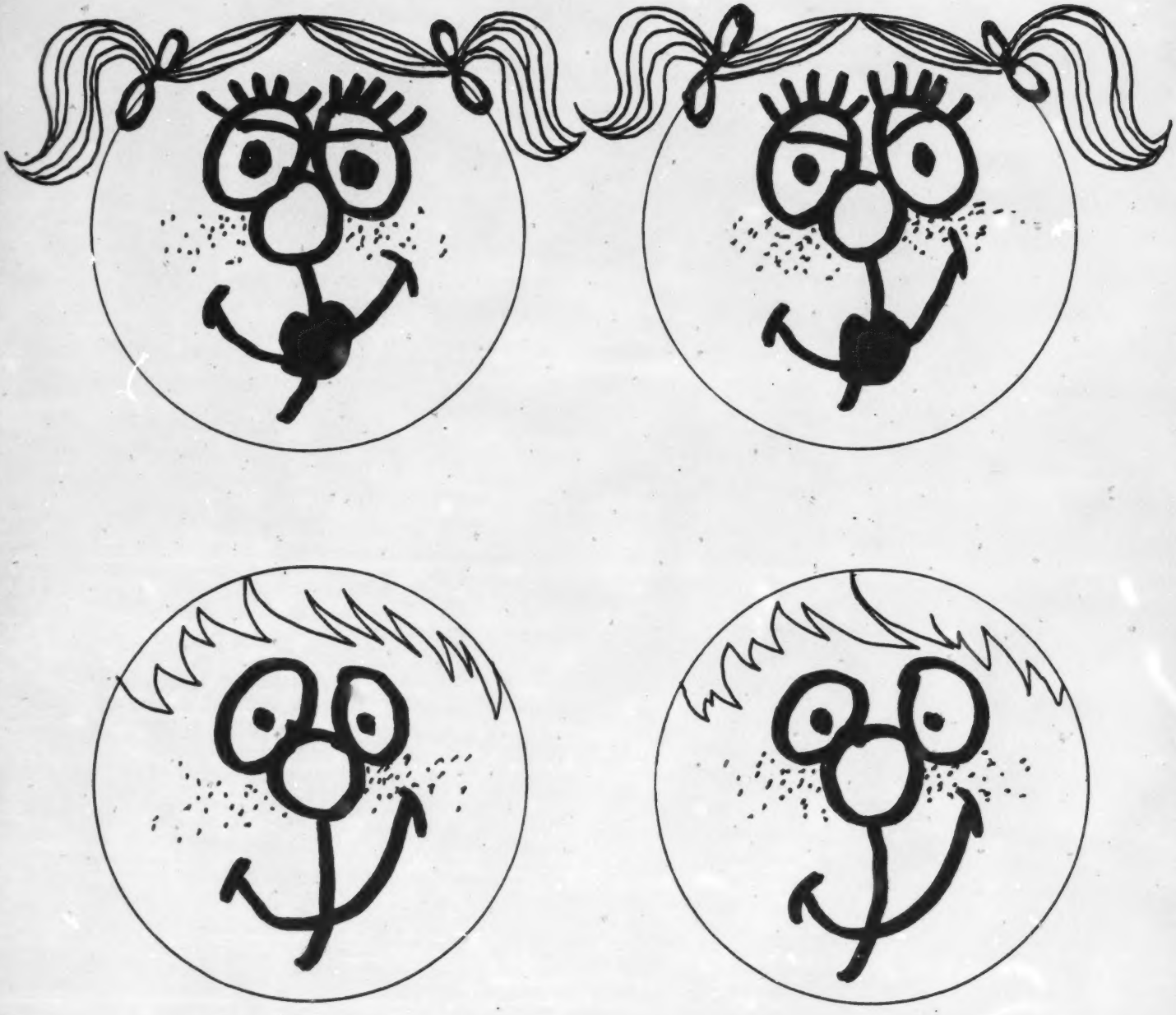
1. "One group of children is really good at climbing high. Can you guess who?" (Repeat child's answer as a question.)
2. "One group of children cries a lot. Can you guess who?" (Repeat answer.)
3. "One group of children always does what the teacher says. Can you guess who?" (Repeat answer.)
4. "One group of children plays rough and hits other children. Can you guess who?" (Repeat answer.)
5. "One group of children always asks the teacher for help. Can you guess who?" (Repeat answer.)
6. "One group of children likes to be in charge of things, to be boss. Can you guess who?" (Repeat answer.)
7. "One group of children likes to be where the teachers are and touch them a lot. Can you guess who?" (Repeat answer.)
8. "One group of children calls other children names, like 'dummy' and 'stupid.' Can you guess who?" (Repeat answer.)
9. "One group of children shows off and wants lots of attention. Can you guess who?" (Repeat answer.)

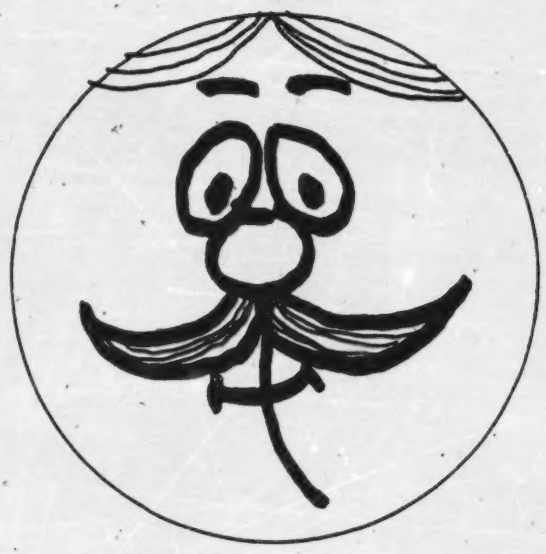
Be sure child understands that there is no <u>correct</u> answer, you want to hear his/her opinion.

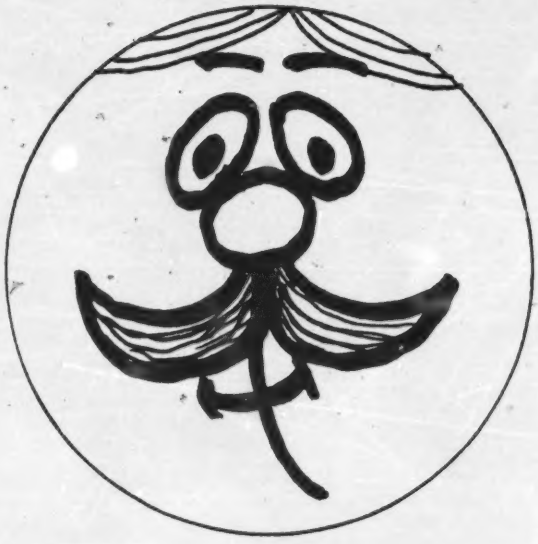
Appendix B:

Line Drawings of Children's and Adults' Faces









Appendix C:

Interviewer Instructions

GENERAL INTERVIEWER INSTRUCTIONS

When you are scheduled to go to a care setting, be on time. Introduce yourself to the director and to the teachers that you will be working with. All of the equipment and materials that you will need will be at the care setting. Test it before you start collecting data. Put it away when you are finished. The videotape recorder cannot be left out. Do not ever point the camera at bright lights or the sun; it will ruin a tube in the camera that costs over $100. If you ever think that the equipment isn't working, call one of us. Label the video and audio tapes with your name and the child's name. Do not rewind your audio tape; that way, it will be ready to go the next time you need it. As you fill a tape, either audio or video, take it to Judy.

Ask the teacher to point out the first child on your list. Introduce yourself to the child; call the child by name. Say something like this to him/her: "Hello, (child's name) . I would like to talk to you and play some games. Let's go into another room where it is quiet." If the child is reluctant, talk to him/her to gain his/her trust. The child may want to ask the teacher if it is okay to go to another room with you. In other words, interact with the child so s/he will like you and what you are going to do with them. Do not use the word "test."

Judy will give you a list of the children that you are to interview and the specific interview that you should do with each child. It is important that you do only the assigned interview with that child. Pick up your list from the brown envelope with your name on it that will be tacked up on the bulletin board near Judy's desk (which is outside my office -- 216 College of Education). Plan to pick it up the day that you are scheduled to collect data; if that won't work, make different arrangements with Judy. Interview the children on your list until you have talked with all of them or until there are fewer than five names left. It isn't worthwhile for you to go to a care setting unless you have at least five names. At that point, return the list to Judy, with the children that you have completed checked off, and she will assign you more names.

Be sensitive to the children's needs. If a child doesn't want to do ar interview, s/he doesn't have to. Just switch to a different child who is on your list and occasionally check with the reluctant child to see if s/he has changed her/his mind. If a child becomes too bored during an interview, stop and finish it another day. Also, watch for needed bathroom breaks. Don't force any child, but you can try to convince them.

Do each interview as exactly as possible. Do not change the intent of the instrument. You can elaborate, if you need to, to help a child understand. But do not give clues or positively reinforce some answers. Be supportive (e.g., "You certainly are doing a good job" or "I'm really glad that you are helping me with this."). If a child seems concerned with getting the questions correct, stress that there are no right answers, that you are interested in what the child thinks about the questions. Thank the child at the end of the interview.

For the interviews that use the sets of three pictures of faces, put the pictures in a different order in front of each child that you interview. Make certain that the child can easily reach each picture. Also be certain that the child understands what the pictures mean. Use the following directions for each interview that uses a set of face pictures:

"Here are some pictures of groups of children/adults." (Spread the three pictures out in front of the child. Put them in a different order each time you do the interview. Point to the picture of all female faces:) "Is this a picture of girls/women or of boys/men or of both girls and boys/both women and men?" (If they answer correctly:) "Good. It's a picture of all girls/women." (If they answer incorrectly, probe to see if they are teasing or if they really do not know. If they do not know, stop the interview. If they are teasing:) "We can't play this game unless you tell me what you really think. Is this a picture of girls/women or boys/men or both girls and boys/both women and men?" (Stop here if they won't answer correctly.)

(Point to the picture of all male faces:) "Is this a picture of girls/women or boys/men or both girls and boys/both women and men?" (If they answer correctly, say "Good" and repeat their response. If they answer incorrectly, go through the procedure described above.)

(Point to the picture of the two female and two male faces:) "Is this a picture of girls/women or boys/men or both girls and boys/both women and men?" (This one may be hard for some of the children, especially the younger ones. If they answer correctly, say "Good" and repeat their response. If they answer incorrectly, point to a female face in the picture and repeat the question. Then point to a male face in the picture and repeat the question. The children will probably answer those two questions correctly, so you say:) "So the picture is of both girls and boys/both women and men." (Be sure that the child understands this picture.) When a child points to this picture, if they point to a specific face, say "Do you mean only (sex of that face) or both girls and boys/both women and men?" If they mean just one sex, show them the picture that they should have pointed to.

We will give you a list of relevant phone numbers. Call us if you have any kind of problem that you do not know how to solve.